

#1489

"DEAD LODGEPOLE PINE - IMPLICATIONS AND OPPORTUNITIES"

MEETING 7/8/93 AT CANOE GULCH RANGER STATION

ATTENDEES:	STEVE TRALLES GEORGE BAIN BILL PUTNAM JIM SHADLE STEVE JOHNSON GARY DICKERSON JOHN CRAIG LEANNE MARTEN RON CURTISS LARRY FROBERG	STATE OF MONTANA WATER QUALITY BUREAU R1 LIAISON - ENVIRONMENTAL PROTECTION AGENCY R1 - REGIONAL HYDROLOGIST KOOTENAI NF - PLANNING STAFF OFFICER KOOTENAI NF - HYDROLOGIST FISHER RIVER RD - SILVICULTURIST FISHER RIVER RD - SALE PREP SPECIALIST FISHER RIVER RD - NEPA COORDINATOR FISHER RIVER/LIBBY RD'S - FIRE MNGMT OFFICER FISHER RIVER RD - DISTRICT RANGER
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MEETING SUMMARY AND WRAPUP BY LF

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0800 OPENING COMMENTS, OBJECTIVES: -- LF

- 1) WELCOME & INTRODUCTIONS
- 2) DISCUSSION FOCUS IS DEAD LODGEPOLE PINE - IMPLICATIONS AND OPPORTUNITIES
- 3) DEAD LP IS SUBSET OF MAJOR NATIONAL PROBLEM OF FOREST HEALTH ISSUES

- * ASSOC CHIEF LEONARD TESTIFIED IN HOUSE OF REP IN 1992 ON FS CONCERN
- * FOREST HEALTH PROBS ARE DIRECT RESULT OF CLIMATIC EVENTS (DROUGHT, ETC), HUMAN ACTIVITIES (FIRE EXCLUSION, HI-GRADE SELECTIVE LOGGING PRACTICES, ETC), AND NATIVE AND INTRODUCED FOREST PESTS AND INSECTS
- * "CHANGE" IS A FUNDAMENTAL PHENOMENON IN ALL NATURAL ECOSYSTEMS
- * FOREST VEGETATIVE SUCCESSION IS ONE TYPE OF INEVITABLE CHANGE
- * SINCE TREES ARE LONG LIVED (HUNDREDS OF YEARS), WE TEND TO FORGET THE ROUTINE CYCLIC NATURE OF FOREST SUCCESSION
- * NATURAL OCCURRING EVENTS (WINDSTORMS, FLOODS, INSECTS, DISEASE, WILDFIRES, AND CLIMATIC CHANGE ALL CAN -- AND HAVE -- PRODUCED CATASTROPHIC LONG TERM CHANGES IN FOREST CONDITIONS WHICH HAVE DETERMINED THE CURRENT STRUCTURE AND HEALTH OF OUR FORESTS
- * THE MOST OBVIOUS IMPACTS OF MAN'S WORK MIGHT BE THE ROADS AND HARVEST UNITS ASSOCIATED WITH TIMBER MANAGEMENT ACTIVITIES
- * "BUT" -- THE INDIRECT EFFECTS OF SOME 90 YRS OF FIRE SUPPRESSION MAY WELL PROOVE TO BE A MORE SIGNIFICANT FACTOR IN FOREST HEALTH ISSUES
- * RESTORING AND MAINTAINING FOREST HEALTH IS A COMPLEX ISSUE - AND IS DIRECTLY RELATED TO "ECOSYSTEM" AND "LANDSCAPE" MANAGEMENT CONCERN
- * FS IS MOVING AWAY FROM "UNIT" AND "FOREST STAND" MANAGEMENT AND TOWARDS THE RESTORATION AND MAINTENANCE OF ECOLOGICAL INTEGRITY OF LARGER BLOCKS OF LAND (ECOLOGICAL LAND UNITS)

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8/8

- * KEY TO RESTORATION AND MAINTENANCE OF MANY ROCKY MOUNTAIN ECOSYSTEMS IS THE USE OF PRESCRIBED FIRE - OR SUITABLE SILVICULTURAL OR OTHER MANAGEMENT PRACTICES - TO MIMIC THE ROLE THAT WILDFIRE FORMERLY PLAYED IN VEGETATIVE DEVELOPMENT AND SUCCESSION
- * CATASTROPHIC WILDFIRES ARE CERTAINLY A MANAGEMENT OPTION. HOWEVER, BOTH THE SHORT AND LONG TERM EFFECTS OF THOSE FIRES FREQUENTLY ARE DEVASTATING TO COMMODITY AND AMENITY VALUES ON OUR PUBLIC LANDS
- * PRHAPS A MORE SUITABLE OPTION IS THE RE-INTRODUCTION OF PRESCRIBED FIRE - OR OTHER SUITABLE MANAGEMENT PRACTICES - WHICH CONTROL AND REDUCE TREE DENSITIES, WHICH FAVOR MAINTENANCE OF EXTENSIVE AREAS OF NATURAL SERAL COMMUNITIES IN BOTH UNDERSTORY AND OVERSTORY VEGETATION; - WHICH REDUCE AND MAINTAIN LOWER FOREST FUEL CONCENTRATIONS TO REDUCE CATASTROPHIC WILDFIRE POTENTIALS; - AND WHICH PROMOTE FOREST STAND AND STRUCTURE CONDITIONS WHICH ARE RESISTANT TO INSECT AND DISEASE EPIDEMICS.
- * UNFORTUNATELY, WHERE INSECT EPIDEMICS HAVE DEVASTATED MANY MILLIONS OF ACRES OF FOREST LANDS, THE ROLE OF WILDFIRE REVERTS TO THAT OF "RESTORING" FOREST HEALTH BY RETURNING VEGETATIVE COMMUNITIES TO EARLY STAGES OF SUCCESSION, AT CONSIDERABLE ENVIRONMENTAL AND SOCIO-ECONOMIC COST (EXTENSIVE SPRUCE BUDWORM MORTALITY IN OREGON AND NORTHERN CALIFORNIA, MOUNTAIN PINE BEETLE MORTALITY IN MONTANA - SOME 2 BILLION BOARD FEET ON THE KOOTENAI NF AALONE IN PAST DECADE, ETC)
- * INSECT EPIDEMICS FREQUENTLY RESULT IN HEAVY FUEL LOADINGS (50-150 TONS PER ACRE IN LP STANDS ON KOOTENAI) WHICH IN COMBINATION WITH THE LADDER AND AERIAL FUELS OF CLIMAX UNDERSTORY TREE COMPONENTS CAUSED BY 90 YEARS OF FIRE EXCLUSION, PRESENT IDEAL FUEL SITUATIONS WHICH INVITE CATASTROPHIC WILDFIRES OF UNPRECEDENTED MAGNITUDE
- * ABNORMALLY HIGH FUEL HAZARDS PLACE ALL INVESTMENTS ON PUBLIC LANDS, ADJACENT PRIVATE LANDS, AND URBAN INTERFACE AREAS AT CONSIDERABLE RISK
- * ASSOC' CHIEF LEONARD REFERENCED THE HISTORY OF FOREST DEVELOPMENT IN THE ROCKY MOUNTAIN REGION IN SAYING... "MANY OF THESE FORESTS NEVER REACHED LATE SUCCESSIONAL STAGES BECAUSE OF FREQUENT NATURAL DISTURBANCES SUCH AS FIRE, INSECTS, AND DISEASES. THE GREATER YELLOWSTONE AREA FIRES OF 1988 ARE AN EXAMPLE OF THIS NATURAL CYCLE..."

4) AS RESPONSIBLE LAND MANAGERS, I BELIEVE WE NEED TO MAKE A CONSCIOUS CHOICE -- RATHER THAN JUST LET THINGS HAPPEN -- REGARDING "FOREST HEALTH" AND "PROTECTION OF OUR BASIC RESOURCES INCLUDING DOWNSTREAM BENEFICIAL USES IN OUR WATERSHEDS". SOME OPTIONS INCLUDE:

- * A CONSERVATIVE STRATEGY THAT DOES NOT RECOGNIZE THE HISTORIC NATURAL ROLE OF FIRE IN FOREST SUCCESSION IN THIS AREA. UNDER THIS PHILOSOPHY, WE ASSUME THAT CATASTROPHIC WILDFIRES CAN BE CONTROLLED OR AVOIDED AND ARE NOT A MANAGEMENT CONCERN. NO SPECIAL EFFORTS WILL BE NECESSARY OR DESIRABLE TO MANAGE THE BUILDUPS OF DEAD LODGEPOLE PINE FUELS ACROSS THE KOOTENAI NF LANDSCAPE;
- * OR - WE CAN ASSUME THE POSTURE THAT "NATURAL OCCURRENCES ARE ACCEPTABLE" BUT THAT MANAGEMENT ACTIVITIES MUST BE MEASURED AGAINST SPECIFIC CRITERIA SPELLED OUT IN LAWS OR STANDARDS (MUCH AS OUR POLICY OF IMPLEMENTING FOREST PLAN STANDARDS, PLUS CURRENT BEST MANAGEMENT PRACTICES, WHILE PROTECTING DOWNSTREAM BENEFICIAL USES FACILITATES COMPLIANCE WITH STATE WATER QUALITY REGULATIONS);

* OR - I BELIEVE WE CAN APPLY SOUND LAND MANAGEMENT POLICIES - INCLUDING BOTH PRESCRIBED FIRE AND SILVICULTURAL PRACTICES - TO BETTER MIMIC THE HISTORIC VEGETATIVE SUCCESSION IN ACHIEVING FOREST CONDITIONS WITHIN THE RANGE OF NATURAL VARIABILITY. EQUALLY IMPORTANT IS THE MITIGATION OF ANY SHORT TERM ADVERSE EFFECTS RESULTING FROM MANAGEMENT ACTIVITIES IN ORDER TO PROMOTE BOTH THE LONG TERM BIOLOGICAL AND SOCIO-ECONOMIC HEALTH OF THE REGION.

5) AS ASSOC' CHIEF LEONARD TESTIFIED BEFORE CONGRESS... "THE HEALTH OF OUR NATION'S FORESTS WILL DEPEND ON HOW WELL WE UNDERSTAND FOREST ECOSYSTEMS, THEIR CYCLES OF CHANGE, AND HOW WELL WE REPRESENT THOSE CHANGES THROUGH MANAGEMENT....."

6) OBJECTIVES FOR TODAYS MEETING: WE ARE NOT HERE TO DEVELOP A FIRM MANAGEMENT POLICY FOR THE KOOTENAI NF RELATED TO MANAGING DEAD LODGEPOLE PINE STANDS. RATHER, I BELIEVE WE CAN CONSIDER THE DAY A SUCCESS IF WE ACHIEVE THREE THINGS:

* FIRST - OPENLY DISCUSS AND DEVELOP A BETTER MUTUAL UNDERSTANDING OF THE SEVERITY OF THE SHORT AND LONG TERM FOREST HEALTH PROBLEMS RELATED TO THE HUGE ACREAGES OF DEAD LPP ON THE KOOTENAI.

* SECOND - DISCUSS THE VARYING MANAGEMENT GUIDELINES AND REGULATIONS FROM THE FOREST, REGIONAL, STATE WQB, AND EPA PERSPECTIVES - AND IDENTIFY INITIAL OPPORTUNITIES FOR COOPERATION TO FACILITATE SOUND MANAGEMENT PRACTICES DESIGNED TO PROMOTE REGIONAL LONG TERM BIOLOGICAL AND SOCIO-ECONOMIC HEALTH.

* AND THIRD - BASED ON FIELD REVIEW OF SEVERAL DEGENERATING LPP STANDS, DISCUSS OPTIONS FOR SPECIFIC MANAGEMENT PRACTICES AND MITIGATION THAT CAN ASSIST IN MEETING BOTH SHORT AND LONG TERM OBJECTIVES.

0845 SLIDE PROGRAM - FIRE EXCLUSION AND IMPLICATIONS - A REGIONAL AND LOCAL PERSPECTIVE ON FOREST HEALTH CONCERNs: -- LF

1) BROAD REGIONAL PERSPECTIVE DESCRIBING FOREST HEALTH CONCERNs FACING LAND MANGERS IN REGIONS TWO, FIVE, SIX, AND ONE.

* FOCUS IS ON FIRE EXCLUSION AND RESULTANT INSECT AND DISEASE EPIDEMICS AND HIGH POTENTIALS FOR ABNORMALLY IMPACTIVE WILDFIRES DUE TO UNPRECEDENTED BUILDUPS OF NATURAL FUEL LOADINGS

* DESCRIBES THE ROLE OF RECURRENT LOW INTENSITY SURFACE FIRES UNDER NATURAL FIRE REGIME VERSUS THE LESS FREQUENT BUT MORE DEVASTATING "CROWN FIRES" WHICH ARE MORE COMMON IN STANDS WITH HEAVY FUEL LOADINGS INCLUDING HIGHER DENSITIES OF LADDER AND AERIAL FUELS IN STAND UNDERSTORIES DUE TO LONG TERM FIRE EXCLUSION.

* PORTRAYS THE INCREASE IN AERIAL FUELS COMPOSED OF SUPPRESSED AND INTERMEDIATE CLIMAX TREE SPECIES IN STANDS WHERE FIRE HAS BEEN HISTORICALLY EXCLUDED (BASED ON ACTUAL PLOTS ESTABLISHED IN 1890 IN PP STAND IN THE BITTERROOT).

* SUGGESTS LANDSCAPE AND ECOSYSTEM MANAGEMENT PRINCIPLES, INCLUDING PRESCRIBED FIRE OR MIMICING MANAGEMENT PRACTICES, ARE NECESSARY TO RESTORE/MAINTAIN THE HEALTH OF FORESTS IN THE ROCKY MOUNTAIN REGION.

2) LOCAL FOREST PERSPECTIVE SHOWING HEAVY DEAD/DOWN FUEL LOADING ON SITE & BLOCKING ROAD DUE TO MOUNTAIN PINE BEETLE MORTALITY IN UPPER TEEPEE CREEK.

* DOWNED FUEL LOADINGS APPROACH 75-100 TONS PER ACRE
* STAND KILLED SOME 12 YRS AGO AND IS VIRTUALLY ALL ON THE GROUND
* MERCHANTABILITY IS BEGINNING TO DECLINE SERIOUSLY
* WINDTHROWN DEAD LPP ALONG ROADWAYS SEVERELY IMPEDES VEHICLE ACCESS FOR MANAGEMENT ACTIVITIES INCLUDING FIRE MANAGEMENT (SOME 50 DEAD LPP 4-14" DBH LYING ACROSS ROADWAY IN A 1/10 MILE SEGMENT).
* DISCUSS 5 TYPICAL PHOTOGRAPHS OF TEEPEE AREA AND OTHER 15 SHOWING HEAVY FUELS LOADING AND ROAD CLOSURE BY WINDFALLS.

3) LOCAL FOREST PERSPECTIVE SHOWING HEAVY STANDING DEAD LPP FROM MOUNTAIN PINE BEETLE MORTALITY IN UPPER THREE MILE CREEK.

* STANDING DEAD LPP STEMS APPROACH 100-150 PER ACRE
* STAND HAS BEEN DEAD FOR 8-10 YEARS AND JUST BEGINNING TO UNRAVEL WITH ONLY 10-20% ON THE GROUND
* TREE MERCHANTABILITY REMAINS FAIRLY GOOD, THOUGH CRACKED AND CHECKED
* ROAD ACCESS NOT YET AFFECTED BY WHOLESALE WINDTHROW OF DEAD TREES

0930 DISCUSS CANYON CREEK WATERSHED EFFECTS SCENERIO (2 HANDOUT GRAPHS): -- LF

1) GRAPH DEPICTING "PFI" AND HYDRO RECOVERY FOR 5 ALTS OVER 30 YRS

* BASELINE ALT 1 - ASSUMES NO DEAD LPP IN STANDS & NO NEW TBR HARVEST
* ALT 2 - ASSUMES DEAD LPP IS WINDTHROWN & NO NEW TBR SALVAGE
* ALT 3 - ASSUMES SALVAGE OF MAJORITY OF DEAD LPP
* ALT 4 - ASSUMES DEAD LPP ON GROUND, NO SALVAGE, 30% AREA IN WILDFIRE
* ALT 5 - ASSUMES DEAD LPP ON GROUND, NO SALVAGE, 75% AREA IN WILDFIRE

* KEY FACTORS:

A) HYDROLOGIC RECOVERY IN DRAINAGE IS OCCURRING AT INCREASING RATES IN PREVIOUSLY CUTOVER AREAS WHICH IS REPRESENTED IN THE BASELINE - ALT 1 RECOVERY CURVES.

B) SIGNIFICANCE OF PFI DIFFERENCE IN YR 1: THE FIRE SCENARIOS RANGE UP FROM 24 TO 36% PFI'S; THE INTENSIVE DEAD LP SALVAGE ALT SHOWS 21%; AND THE BASELINE IS AT 15%. (THE SEVERE WILDFIRE EFFECTS WOULD BE SOME 70% GREATER ON PFI THAN MAX SALVAGE OPTION).

C) SIGNIFICANCE OF DURATION OF EFFECTS: THE SEVERE WILDFIRE ALT SHOWS DRAINAGE RECOVERY IN SOME 20 YRS (BUT ACTUALLY BURNED AREA WOULD BE SEVERELY IMPACTED IN SHORT TERM AND COMPOUNDED OVER A LONGER PERIOD). THE MAX SALVAGE ALT PROJECTS DRAINAGE RECOVERY IN SOME 12 YEARS. WHILE THE "NO SALVAGE - LEAVE LPP LAY" ALT SHOWS DRAINAGE RECOVERY IN SOME 10 YRS. (NOT MUCH DIFFERENCE IN LENGTH OF TIME BETWEEN SALVAGE AND "LET LPP LAY").

D) IF WE "DO NOTHING" (ALT 2 - LET LPP WINDTHROW AND LIE), THE FUEL LOADINGS WILL RANGE FROM 75-150 TONS PER ACRE FOR 2-4 DECADES. THE CURRENTLY SURPRESSED CLIMAX UNDERSTORY TREES PLUS NATURAL REGENERATION WHICH COMES UP THROUGH THE WINDFALLS WILL RESULT IN A CONTINUOUS LAYER OF INCREASINGLY DENSE AND VOLATILE AERIAL FUELS ABOVE THE HEAVY GROUND FUELS. THAT SIGNIFICANT FUELS AND FIRE RISK SITUATION WILL PERSIST UNTIL THE GROUND FUELS DECOMPOSE NATURALLY OR THE AREA EXPERIENCES A CATASTROPHIC WILDFIRE.

2) GRAPH DEPICTING "ANNUAL SEDIMENT INCREASE" FOR 5 ALTS OVER 30 YRS

- * BASELINE ALT - ASSUMES NO DEAD LPP IN STANDS & NO NEW TBR HARVEST
- * ALT 2 - ASSUMES DEAD LPP IS WINDTHROWN & NO NEW TBR SALVAGE
- * ALT 3 - ASSUMES SALVAGE OF MAJORITY OF DEAD LPP
- * ALT 4 - ASSUMES DEAD LPP ON GROUND, NO SALVAGE, 30% AREA IN WILDFIRE
- * ALT 5 - ASSUMES DEAD LPP ON GROUND, NO SALVAGE, 75% AREA IN WILDFIRE

* KEY FACTORS:

- A) THE SEDIMENT LOADING FOR THE MAX WILDFIRE ALT IS PROJECTED AT SOME 1100% INCREASE OVER NATURAL CONDITIONS WHICH IS 3 1/2 TIMES AS GREAT AS THE MAX SALVAGE OPTION (ESTIMATED AT SOME 300% INCREASE).
- B) THE SEDIMENT LOADING FOR THE 30% WILDFIRE ALT IS PROJECTED AT SOME 600% INCREASE ABOVE NATURAL CONDITIONS WHICH IS TWICE AS GREAT AS THE MAX SALVAGE OPTION.
- C) THE PEAK SEDIMENT INCREASE FOR THE MAX SALVAGE OPTION IS SHORT LIVED (1-2 YRS) AT A PROJECTED LEVEL OF 300% ABOVE NATURAL LEVELS WHICH IS LESS THAN 4 PEAKS IN LAST 20 YEARS AND ASSUREDLY WITHIN THE NATURAL RANGE OF VARIABILITY FOR A DRAINAGE WITH AN EXTENSIVE HISTORY OF STAND REPLACEMENT WILDFIRES.

1000 DISCUSSION OF H2O STANDARDS, GUIDES, RULES, AND OPINIONS: -- ALL

REVIEWED VARIOUS STANDARDS AND GUIDELINES USED BY DIFFERENT LAND MANAGERS IN WESTERN MONTANA. THE MAJOR POINT WAS THAT THESE VARIOUS UNIT GUIDES ARE NOT NECESSARILY WRONG, BUT ONLY THAT THEY ARE DIFFERENT. IN MOST CASES, THE ONLY DIFFERENCE BETWEEN WHICH RULES APPLY IS AN ADMINISTRATIVE BOUNDARY BETWEEN NATIONAL FORESTS OR A PROPERTY LINE BETWEEN OWNERSHIPS.

1) PRIVATE CORPORATE LAND MANAGEMENT POLICIES ARE DIRECTED TOWARDS COMPLIANCE WITH STATE LAWS, APPLICATION OF "BEST MANAGEMENT PRACTICES", AND MOST RECENTLY, FOLLOWING THE NEW "SMZ LAW". AREA WATERSHED ANALYSES ARE NOT A COMMON PRACTICE.

2) FLATHEAD NATIONAL FOREST PLAN:

- A) DESIGNATES SPECIFIC RIPARIAN ZONES
- B) IDENTIFIES AN INTENSIVE LIST OF FOREST "BMP'S" FOR ALL PROJECTS AND IS SUPPLEMENTED WITH RECENT "STATEWIDE BMP LIST" PLUS STATE "SMZ LAW".
- C) DOES NOT PRESCRIBE A MODEL FOR ANALYSIS OR GUIDELINES FOR INTERPRETATION OF AREA WATERSHED ANALYSES.

3) KOOTENAI NATIONAL FOREST PLAN:

- A) FOCUSES ON "PEAK FLOW INCREASE" AS PRIMARY MEASURE OF WATERSHED EFFECTS RATHER THAN OVERALL ANNUAL WATER INCREASES
- B) DOES NOT PRESCRIBE STANDARDS FOR SEDIMENT DELIVERY TO STREAMS
- C) DOES PRESCRIBE SPECIFIC ANALYSIS PROCEDURES, INCLUDING A MODEL AND INSTRUCTIONS TO PREDICT "PFI'S", PLUS STANDARDS BY STREAM CHANNEL CONDITIONS (BRIEFLY REVIEWED APPENDIX 17 IN KNF PLAN)
- D) PRESCRIBES HYDROLOGIC RECOVERY CURVES

4) PROPOSED STATE OF MONTANA "WATER NON-DEGRADATION RULES" (6/93)

BRIEFLY REVIEWED THE PROPOSED RULES WITH ATTENTION TO RULE VIII "CRITERIA FOR DETERMINING NONSIGNIFICANT CHANGES IN WATER QUALITY".

- A) SOME KEY PHRASING IS IN SUBPART A, REFERENCING ACTIVITIES NOT REQUIRED TO UNDERGO REVIEW UNDER 75-5-303 MCA, SUCH AS ACTIVITIES ... "APPROVED, AUTHORIZED OR REQUIRED BY THE DEPARTMENT OR THE US EPA, PROVIDED THE BENEFITS DERIVED FROM THE ACTIVITY SUBSTANTIALLY EXCEED THE HARM IN CHANGES TO WATER QUALITY".

THAT LANGUAGE IS OPEN TO SOME INTERPRETATION. THE STATE WQB IS CURRENTLY CONDUCTING PUBLIC MEETINGS ACROSS THE STATE AND ENCOURAGING INTERESTED PARTIES TO COMMENT. TO DATE, THERE HAS BEEN NO INPUT FROM FEDERAL AGENCIES OR OTHER MAJOR LANDOWNERS.

1030 GENERAL DISCUSSION: -- ALL

- 1) EPA REVIEWS WILL FOCUS ON COMPLIANCE WITH STATE LAWS
- 2) NUMBERS FROM A WATERSHED ANALYSIS MODEL ARE NOT ABSOLUTE
- 3) FS SHOULD WORK TOWARDS ESTABLISHING BASELINE INFO, THEN M&E EFFECTS
- 4) "M&E" OF EFFECTS IS KEY PROCESS, PERHAPS BEST IMPLEMENTED AND FUNDED APART FROM REGULAR PROJECT WORK
- 5) EPA SUPPORTS ESTABLISHING M&E PROCEDURES THAT CAN BE IMPLEMENTED DURING THE PROJECT IN TIME TO MODIFY PRACTICES IF DEGRADATION OCCURS
- 6) AIR QUALITY WILL BECOME A MORE SIGNIFICANT CONCERN IN YEARS AHEAD
- 7) IMPORTANT FOR FOREST TO BUILD GOOD ANALYSES OF EFFECTS ON AIR QUALITY
- 8) STATE EXPECTS ALL REASONABLE BMP'S TO BE IMPLEMENTED ON FS PROJECTS
- 9) BMP'S MUST BE DESIGNED TO PROTECT BENEFICIAL USES
- 10) "PROTECTING BENEFICIAL USES" IS NOT WELL DEFINED OR WIDELY UNDERSTOOD
- 11) FS ANALYSES SHOULD INCLUDE EVALUATION OF POSITIVE LONG TERM EFFECTS AND THE RELATIONSHIP WITH ANY SHORT TERM ADVERSE EFFECTS ON BENEFICIAL USES
- 12) MANAGEMENT DECISIONS WHICH HAVE SHORT TERM ADVERSE EFFECTS MAY BE SUPPORTED BY STATE WQB AND EPA IF ANALYSES CLEARLY DEMONSTRATE THE LONG TERM PROTECTION OF BENEFICIAL USES
- 13) STREAM CHANNELS HAVE DEVELOPED UNDER A WIDE RANGE OF NATURAL CONDITIONS AND CURRENT SITUATION IS NOT STATIC
- 14) ANALYZING A NATURAL RANGE OF VARIABILITY (ECOSYSTEM MNGMT PRINCIPLE) FOR WATERSHEDS PROVIDES A BETTER PERSPECTIVE FOR MANAGEMENT DECISIONS TO ASSURE THEY ARE WITHIN ACCEPTABLE BOUNDS OF THAT BROADER NATURAL RANGE
- 15) ANALYZING WATERSHED CONDITIONS VIA WATSED USING VARIOUS HYDROGRAPHS WOULD PROVIDE A BROADER PERSPECTIVE OF NATURAL VARIABILITY

1115 DUNN CREEK FIELD VISIT: -- ALL

- 1) MUCH OF DEAD LODGEPOLE PINE IS ON THE GROUND AND TREES ARE BEGINNING TO CRACK AND CHECK, WHICH SIGNIFICANTLY REDUCES MERCHANTIBILITY AND VALUES
- 2) WITH SUITABLE MITIGATION INCLUDING SENSITIVE HARVEST PRACTICES, THE REMOVAL (SALVAGE) OF DEAD AND DOWN TIMBER HAS NO SIGNIFICANT HYDROLOGIC EFFECT DUE TO CLOSE PROXIMITY OF THE TREES TO THE GROUND
- 3) STANDING DEAD LODGEPOLE TREES APPROXIMATE THE HYDROLOGIC IMPACTS OF STANDING GREEN TIMBER IN TERMS OF REDUCING WIND SPEEDS, REDUCING GROUND-AIR TEMPERATURES, & INTERCEPTING PRECIPITATION (NO ACTIVE TRANSPERSION)
- 4) REMOVAL OF UP TO 20% OF THE STANDING TREES (GREEN OR DEAD) WOULD NOT PRODUCE ANY SIGNIFICANT OR MEASUREABLE HYDROLOGIC EFFECTS
- 5) ONCE DEAD TIMBER IS WINDTHROWN, MERCHANTIBILITY AND VALUE RECOVERY DECREASES SIGNIFICANTLY, WHICH REDUCES POTENTIAL FUNDS AVAILABLE TO DO MITIGATION WORK WITHIN THE SALE AREA
- 6) WHEN DEAD TIMBER IS STANDING, LOW-IMPACT WINTER LOGGING PRACTICES WOULD ENABLE EFFICIENT SALVAGE OPERATIONS WHEREAS DOWNDEN TIMBER COULD ONLY BE SALVAGED IN NON-SNOW PERIODS, WITH RESULTING SITE DISTURBANCE AND SOIL COMPACTION POTENTIALS
- 7) A GOOD ANALYSIS OF THE TRADEOFFS BETWEEN "NO ACTION - WILDFIRE", AND "WAITING TO SALVAGE DEAD WHEN TREES ARE WINDTHROWN", VRS "LOW IMPACT HARVEST OPERATIONS TO SALVAGE DEAD WHILE STILL STANDING" MAY SUPPORT THE SALVAGE OF STANDING DEAD WHERE LOW IMPACT WINTER LOGGING PRACTICES CAN BE USED AND HIGHER VALUE PRODUCTS MAY SUPPORT DESIRABLE MITIGATION AND REHAB WORK.
- 8) USE OF EXISTING SKID TRAILS OR HAUL ROADS MAY CREATE LESS IMPACT THAN CONSTRUCTING NEW ONES DEPENDING ON SLOPE, SOIL TYPES, VEGETATION STATUS, AND PROXIMITY TO OVERLAND FLOW AND STREAMS (NEED TO EVALUATE ON A SITE SPECIFIC BASIS)
- 9) NEED TO IDENTIFY APPROPRIATE MITIGATION AND REHAB WORK NEEDS WITHIN THE SALE AREA DURING RECON FOR POSSIBLE SALE OR HARD MONEY FUNDING
- 10) IF MATERIAL IS NOT SALVAGED, SIGNIFICANT NATURAL FUELS BUILDUPS WILL OCCUR, WITH NEW REGENERATION AND CURRENT SURPRESSED AND INTERMEDIATE GREEN TREES PROVIDING IDEAL AERIAL FUELS FOR MANY DECADES
- 11) SALVAGE OF DEAD TIMBER WHILE KEEPING GREEN RESIDUALS ON SITE CAN PROVIDE NATURAL MOSAICS OF VEGETATION (MULTIAGED STANDS TO ENHANCE FUTURE MANAGEMENT OPTIONS)
- 12) THE UNDERSTORY STAND SPECIES, FORBS, SHRUBS, AND GRASSES VARY CONSIDERABLY DURING VARIOUS VEGETATION SUCCESSIONAL STAGES. BROADCAST BURING IS DESIRABLE TO CONVERT "CLIMAX UNDERSTORY CONDITIONS" TO THE MORE NATURAL SERAL CONDITIONS WHICH DEVELOP IF DEAD LP IS REMOVED FROM SITE
- 13) BROADCAST BURING IS DESIRABLE TO REDUCE THE MAT OF SMALL DOUGLAS FIR ON SITE AND TO BETTER MIMIC NATURAL FIRE EFFECTS WITHOUT THE CATASTROPHIC IMPACTS OF EXTENSIVE WILDFIRE

1300 CANYON CREEK FIELD VISIT: -- ALL

- 1) DISCUSSED MANY OF THE OBSERVATIONS AND OPINIONS PREVIOUSLY NOTED AT THE DUNN CREEK STAND
- 2) STAND IS 80% LODGEPOLE AND IS 90% DEAD, WITH PROJECTED FUEL LOADINGS EXCEEDING 100-150 TONS PER ACRES
- 3) STANDING DEAD IS PROVIDING HYDROLOGIC RELIEF SIMILAR TO STANDING GREEN

- 4) THE SALVAGE OF WINDTHROWN DEAD TREES DOES NOT AFFECT HYDROLOGIC PROJECTIONS DUE TO THE CLOSE PROXIMITY TO GROUND AND LIMITED EFFECTS ON AIR TEMPERATURES, WIND MOVEMENTS, AND SNOWPACK ACCUMULATION. SENSITIVE AND "LIGHT ON THE LAND" TIMBER HARVEST PRACTICES AND SLASH/SITE PREP PRACTICES ARE NECESSARY TO MINIMIZE SOIL DISTURBANCE AND COMPACTION.
- 5) WINTER LOGGING IS A "LIGHT ON THE LAND TREATMENT" BUT IS NOT FEASIBLE TO SALVAGE WINDTHROWN TIMBER.
- 6) ANALYSIS SHOULD DISPLAY BOTH THE SHORT TERM AND LONG TERM EFFECTS OF VARIOUS ALTERNATIVES (NO ACTION - WILDFIRE; SENSITIVE SALVAGE OF LOWER VALUE WINDTHROWN DEAD; SENSITIVE SALVAGE OF HIGHER VALUE STANDING DEAD USING LOW IMPACT PRACTICES AND FUNDING DESIRABLE MITIGATION AND REHAB AS POSSIBLE; ETC)
- 7) THE ANALYSIS SHOULD DISCUSS THE "EFFECTS OF THE NUMBERS" FROM WATERSHED MODELS RATHER THAN JUST REFERENCE THE NUMBERS AS ABSOLUTE
- 8) THE "EFFECTS" SHOULD BE DISCUSSED WHETHER THE "NUMBERS" ARE ABOVE OR BELOW ANY "RED FLAG THRESHOLDS" - WE SHOULD NOT ASSUME THAT ANYTHING THAT IS BELOW THE NUMERICAL THRESHOLD NEEDS NO DISCUSSION
- 9) CONSIDER AN ALTERNATIVE THAT "STAGES ACTIVITIES" OVER SEVERAL YEARS TO REDUCE SHORT TERM IMPACTS WHILE ATTEMPTING TO REACH MANAGEMENT ALTERNATIVES IN THE LONG RUN (AS IS BEING DONE UNDER THE CANYON SALVAGE PROPOSAL)
- 10) MONITORING THE SPECIFIC ON-SITE AND DOWNSTREAM EFFECTS OF INDIVIDUAL PROJECTS MAY BE DESIRABLE BUT IS DIFFICULT TO IMPLEMENT DUE TO LACK OF SITE SPECIFIC BASELINE DATA AND SEASONAL VARIATIONS IN PRECIP AND RUNOFF
- 11) WE SHOULD BE CONSIDERING OPPORTUNITIES FOR SITE SPECIFIC MONITORING DURING PROJECT IMPLEMENTATION THAT CAN BE USED FOR IMMEDIATE ON-SITE EVALUATION OF PRACTICES IN ORDER TO ALLOW "PROMPT SHUTDOWN OR MODIFICATION" AS NECESSARY TO MINIMIZE EFFECTS (THIS IS A PRINCIPLE SIMILAR TO THAT OF USING "SALE ADMINISTRATORS" AND "ENGINEERING REPRESENTATIVES" FOR ONGOING M&E - IN A SUBJECTIVE SENSE - BUT THE PROPOSAL WOULD BE TO ESTABLISH ACTUAL OBJECTIVE DATA COLLECTION/OBSERVATION ON EFFECTS AND EFFECTIVENESS OF THE PRACTICES WHILE IN PROGRESS)
- 12) CONCERNING M&E DATA RELATED TO WILDFIRES, THERE MAY BE SUBSTANTIAL MONITORING INFORMATION AVAILABLE FROM EPA FUNDED WORK IN YELLOWSTONE PARK AFTER THE CATASTROPHIC FIRES OF 1988. OTHER SOURCES COULD INCLUDE: 1) RED BENCH FIRE ON FLATHEAD NF AND GLACIER NP; 2) CANYON CREEK FIRE ON FLATHEAD/LOLO/L&C/ AND HELENA NF; 3) OTHERS MAY BE ID'ED THRU THE R1 FIRE SHOP.

1500 CLOSEOUT DISCUSSION - OVERLOOKING DRY FORK WILDFIRE AREA -- LF

CLOSEOUT DISCUSSION FOR GROUP WAS IN UPPER DRY FORK CREEK OVERLOOKING SEVERAL THOUSAND ACRES OF THE DRY FORK WILDFIRE AREA WHERE INTENSE CROWNFIRE KILLED VIRTUALLY 100% OF THE STANDING TIMBER. THE AREA HAS REGENERATED WELL IN LAST 5 YRS AND MERCHANTABLE TIMBER ON SOME 40% OF AREA HAS BEEN SALVAGED. REMAINING DEAD TIMBER WILL WINDTHROW IN NEXT DECADE TO CREATE NATURAL FUEL LEVELS EXCEEDING 100 TONS PER ACRE OVER MUCH OF THE AREA. NEW REGENERATION GROWING UP THROUGH THE WINDFALL WILL CREATE HIGH POTENTIALS FOR DEVASTATING WILDFIRES IN THE FUTURE RESULTING IN LOSSES OF INVESTMENTS IN MANAGED STANDS AS WELL AS REPEATED CATASTROPHIC EFFECTS UPON BASIC SOIL, AIR, WATER, AND FISH RESOURCES.

I BELIEVE THE OBJECTIVES FOR THE DAY WERE ACHIEVED:

A) WE DEVELOPED A BETTER MUTUAL UNDERSTANDING OF THE SEVERITY OF THE SHORT AND LONG TERM PROBLEMS RELATED TO THE HUGE ACREAGE OF DEAD LODGEPOLE ON THE FOREST. ACHIEVED THROUGH PRESENTATION AND DISCUSSION OF FUELS AND FIRE POTENTIALS IN MEETING AND DURING FIELD VISITS TO TYPICAL STANDS OF DEAD LODGEPOLE IN VARYING STAGES OF DEGENERATION.

WE CONCURRED THAT THE FOREST IS NOT A STATIC ENTITY AND THAT NATURAL PROCESSES RESULT IN SIGNIFICANT CHANGES IN CONDITIONS OVER TIME. FOR EXAMPLE, THE EXCLUSION OF WILDFIRE AS A ROLE PLAYER IN OUR ECOSYSTEMS DURING THE PAST 80 YEARS HAS RESULTED IN DRAMATIC CHANGES TO UNDERSTORY VEGETATION, NATURAL FUEL LOADINGS, AND INSECT AND DISEASE SUSCEPTIBILITY. SIMILARLY, DURING THE NEXT DECADE, THE HEAVY FUEL LOADINGS FROM WINDTHROWN DEAD TIMBER WILL MAINTAIN HIGH POTENTIALS FOR CATASTROPHIC WILDFIRES FOR MANY DECADES TO COME. LAND MANAGEMENT DECISIONS MUST CONSIDER BOTH THE SHORT TERM AND LONG TERM EFFECTS OF PROPOSALS DURING ANALYSES.

B) WE CONSIDERED AND DISCUSSED THE DIFFERENCES IN VARYING MANAGEMENT GUIDELINES FROM THE PERSPECTIVES OF THE KOOTENAI NF, FLATHEAD NF, PRIVATE CORPORATE LANDS, FS REGION 1, MSWQB, AND THE EPA. WE DISCUSSED BACKGROUND DATA AND EXPLORED OPPORTUNITIES TO FACILITATE SOUND LAND MANAGEMENT PRACTICES DESIGNED TO PROMOTE LONG TERM BIOLOGICAL AND SOCIO-ECONOMIC HEALTH IN THE AREA. ACHIEVED DURING BOTH THE OFFICE DISCUSSION OF FOREST HEALTH ISSUES AND DURING FIELD VISITS TO TYPICAL DEAD STANDS.

PARTICULARLY CONFUSING AND FRUSTRATING TO ALL PARTIES IS THE "APPARENT DIFFERENCE IN INTERPRETATIONS OF ACCEPTABLE PRACTICES AND THRESHOLDS" BETWEEN DIFFERENT LAND MANAGING ENTITIES. THE ADMINISTRATIVE OR "PROPERTY LINE" BETWEEN PRIVATE AND NF, OR EVEN BETWEEN THE KOOTENAI AND FLATHEAD NF, RESULTS IN VERY DIFFERENT STANDARDS FOR PROTECTION OF WATER AND BENEFICIAL USES - WHEN LANDS ARE ONLY A FEW FEET APART.

DURING THE FIVE YEAR REVIEW PROCESS OF FOREST MANAGEMENT PLANS, THE FS REGIONAL OFFICE WILL BE CONSIDERING GREATER COORDINATION BETWEEN FORESTS AND SOME STANDARDIZATION OF WATERSHED MANAGEMENT GUIDELINES ACROSS ALL FORESTS IN R1.

THE NEW STATE RULES REGARDING "NONDEGRADATION POLICIES" MAY FACILITATE THE APPLICATION OF PRACTICES WITH POSITIVE LONG TERM IMPACTS TO WATER AND BENEFICIAL USES, WHERE ANALYSES CAN DEMONSTRATE THOSE LONG TERM BENEFITS OUTWEIGH ANY SHORT TERM EFFECTS.

C) WE DISCUSSED AND EVALUATED A NUMBER OF SPECIFIC MANAGEMENT PRACTICES AND MITIGATION THAT COULD BE USED TO BETTER MEET BOTH SHORT TERM AND LONG TERM RESOURCE MANAGEMENT OBJECTIVES. KEY ITEMS INCLUDE:

- 1) DISTRICT WILL WORK WITH SO/RO/WQB/EPA IN DEVELOPING APPROPRIATE MONITORING PLANS TO ENABLE "IN PROGRESS M&E" OF PROJECTS TO FACILITATE TIMELY CHANGE IN PRACTICES AS NEEDED TO PROTECT BASE VALUES.

2) DISTRICT WILL EVALUATE BOTH SHORT AND LONG TERM EFFECTS OF ALTERNATIVES IN ANALYSES TO ENABLE OBJECTIVE COMPARISON OF MANAGEMENT DECISIONS, INCLUDING THAT OF NO ACTION.

THE FOREST IS NOT A STATIC ENTITY AND ECOSYSTEMS CONTINUE TO CHANGE AND MATURE UNDER NATURAL PROCESSES. THOSE CURRENT AND FUTURE CONDITIONS SHOULD BE CONSIDERED IN ALL ANALYSES.

3) DISTRICT WILL INCLUDE THE EVALUATION OF "MODEL RESULTS AND OTHER NUMERICAL GUIDELINES" IN PROJECT ANALYSES RATHER THAN ASSUME THAT THE "NUMBERS" ARE ABSOLUTES. THIS EVALUATION APPLIES TO SITUATIONS WHERE THE "PROJECTIONS" ARE BELOW THE "NUMERICAL GUIDELINES" AS WELL AS WHEN THE CASE IS REVERSED.

4) DISTRICT WILL INCLUDE EVALUATIONS OF THE "LENGTH OF EFFECTS" AS WELL AS "DEGREE OF EFFECTS" WHEN CONSIDERING MANAGEMENT OPTIONS FOR SALVAGE OF BOTH STANDING AND WINDTHROWN DEAD TIMBER.

FOR EXAMPLE, IT MAY BE MORE BENEFICIAL IN THE LONG RUN TO SALVAGE HIGHER-VALUE STANDING DEAD NOW, USING SENSITIVE PRACTICES AND CAPITALIZING ON KV REVENUES TO DO DESIRABLE MITIGATION, RATHER THAN WAIT FOR THE STAND TO PROGRESSIVELY WINDTHROW, REQUIRING REPEATED MACHINE ENTRIES TO SALVAGE LOWER VALUE MATERIAL. IF NO SALVAGE OCCURS, THEN THE RISK OF CATASTROPHIC WILDFIRES IS PRESENT FOR MANY DECADES.

5) DISTRICT WILL IMPLEMENT PROJECTS AND PRACTICES UNDER GROUP CONSENSUS THAT THE SALVAGE OF DEAD AND WINDTHROWN TIMBER USING SENSITIVE "LIGHT ON THE LAND" MANAGEMENT PRACTICES WILL NOT ADVERSELY AFFECT WATERSHED VALUES, ESPECIALLY WHERE SEDIMENT TRANSPORT TO THE STREAMCOURSE IS NOT A FACTOR. HYDROLOGISTS WILL CONTINUE TO REVIEW PROPOSALS AND WILL RECOMMEND DESIREABLE ENHANCEMENT WORK AND MITIGATION FOR KV OR OTHER REHAB PROJECTS.

6) IN FORSEEABLE FUTURE, THE FISHER RIVER RANGER DISTRICT WILL BE FOCUSING EFFORTS TO SALVAGE DEAD AND HIGH RISK LODGEPOLE PINE THROUGHOUT THE DISTRICT TO FACILITATE FOREST PLAN OBJECTIVES. WE WILL WORK TOWARDS DEVELOPING PRESCRIPTIONS ON A "LANDSCAPE BASIS" TO ENHANCE OBJECTIVES OF MINIMIZING HABITAT FRAGMENTATION WHILE PROMOTING LONG TERM MANAGEMENT OPPORTUNITIES IN MULTISTORIED AND MULTIAGED STANDS ACROSS BROADER AREAS.

7) THE DISTRICT WILL CONSIDER OPPORTUNITIES TO "STAGE" MANAGEMENT ACTIVITIES OVER SEVERAL YEARS IN DRAINAGES WITH HEAVY LODGEPOLE PINE MORTALITY TO MINIMIZE EFFECTS FROM A LANDSCAPE PERSPECTIVE. THIS INCLUDES A REVIEW OF OTHER SCHEDULED MANAGEMENT PRACTICES, INCLUDING ROAD CONSTRUCTION AND MAINTENANCE, SITE PREPARATION, DIRECT FUEL TREATMENTS (SALVAGE, BURNING, OR OTHER TREATMENT), INDIRECT FUEL TREATMENTS (FUELBREAKS, STRIP SALVAGES, ETC) AND OTHER PROJECTS WHICH MAY IMPACT THE AREA.

1530 MEETING ADJOURNED